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Appl. No. 09/911,066
Amdt. Dated August 29, 2003
Reply to Office Action of April 4, 2003

•• REMARKS/ARGUMENTS ••

The present Preliminary Amendment is being filed together with a Request for Continued Examination of the above-identified application.

By the present amendment, claims 2-9 and 21 have been cancelled without prejudice or disclaimer in response to the Restriction Requirement set forth by the Examiner on page 2 of the Official Action Office Action dated April 4, 2003.

Applicants reserve their right to seek patent protection of the subject matter of claims 2-9 and 21 by way of filing one or more divisional patent applications during the pendency of the present application.

Also by the present amendment independent claims 22 and 23 have been changed to emphasize that the present invention is directed to gaskets that are used for sealing electrolytic fluids. As presented in the "Background Art" section of applicants' specification and in the abstract of the disclosure, applicants' gaskets are particularly useful in fuel cells, secondary batteries and condensers.

Independent claims 22 and 23 have further been amended to recite a pair of elastomeric polymer (or elastomer) members, the positional relationship between the compression limiter and the elastomeric polymer (or elastomer) members, and the manner of compressing the carrier members between planar plates as depicted in Fig. 1.

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Dependent claim 13 has been changed to recite that the units of hardness of the elastomeric polymer are "Duro A" which is consistent with Japanese Industrial Standard (JIS) K6253. JIS K6253 was the current known and accepted industrial standard at the time of applicants' invention and is referred to consistently throughout the specification.

Entry of the changes to the claims is respectfully requested.

On page 2 of the Official Action of April 4, 2003 the Examiner objected to claims 18-20 as being dependent upon canceled claim 16.

By the present amendment, claims 18-20 have been changed to depend from claim 23.

Claim 13 was previously rejected under 35 U.S.C. §112, second paragraph. Under this rejection the Examiner took the position that it was unclear as to what the "hardness of about 10 to 70" is related to or relative to.

In response to this rejection, claim 13 has been changed to recite a Duro A hardness of between 10 and 70.

In the Office Action of April 4, 2003 claims 11, 13, 18, 19, 22 and 23 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,145,847 to Maeda et al.

Claims 12, 17 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Maeda et al.

For the reasons set forth below, it is submitted that all of the pending claims are allowable over the prior art of record and therefore, each of the outstanding rejections of the claims should properly be withdrawn.

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Favorable reconsideration of the Examiner is earnestly solicited.

In the previous Office Action the Examiner has relied upon Maeda et al. as disclosing a static gasket that comprises "a first carrier member and a second carrier member, i.e., the at least two metal plates (1, 2)." The Examiner relied upon Maeda et al.'s second carrier member as being disposed under the first carrier member, and stated that Maeda et al. discloses an elastomeric polymeric member (7) disposed on an upper surface of the first end portion of the first carrier member. The Examiner further relied upon Maeda et al. as disclosing the use of a compression limiter provided adjacent to said elastomeric polymer member.

Maeda et al. is directed to a metal laminate head gasket for an internal combustion engine, and therefore, is not concerned with or related to gaskets that are suitable for sealing electrolyte fluids or use in fuel cells, secondary batteries, condensers, or related applications.

The Examiner relied on the "rigid synthetic resin layer" disclosed in Maeda et al.'s abstract as reading on applicants' claimed compression limiter. The "rigid synthetic resin layer" is identified by reference numeral 6 in the Figures of Maeda et al. and is used to limit the compression of the bead portions 5 - not to limit the compression of the sealing material layers 7.

It is important to appreciate Maeda et al.'s invention in light of the prior art discussed in the "Background of the Invention" section of Maeda et al. As discussed, projecting elements or "bead portions" were provided on cylinder head gaskets to increase the thickness of the gaskets near holds provided therein. A problem followed when the bead portions were compressed or flattened out.

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Various metal plates, stoppers, shims etc. were incorporated to prevent the bead portions from deforming under compression.

Maeda et al.'s invention is the use of a "rigid synthetic resin layer" to withstand the compression forces and prevent the bead portions from flattening out.

The Examiner's attention is respectfully directed to the figures of Maeda et al. and particularly to the space or gap that is provided between bottom of the rigid synthetic resin layer 6 and the upper surface of underlying sealing layer 7.

The gap precludes rigid synthetic resin layer 6 from functioning as a compression limiter between the sealing layers 7, because the metal plate in which recess 51 is formed is thicker than rigid synthetic resin layer 6. That is, the metal plates will compress the intermediate sealing layer before the bottom of the rigid synthetic resin layer 6 ever even contacts the sealing layer 7.

Applicants' compression limiter is provided between the first and second carrier members and adjacent the elastomer members which are on outer surfaces of the carrier members. (See Fig. 1).

The rigid synthetic resin layers 6 of Maeda et al. are provided between the upper metal plate and the underlying sealing layer 7.

The structure of Maeda et al. does not read on the structure of applicants' claimed invention.

In order to more clearly distinguish the structure of the present invention over Maeda et al. the independent claims have been changed to recite the orientation of the elements of applicants' invention.

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For example, the independent claims now recite that the compression set limiter is provided "horizontally adjacent" the elastomer members. This limitation considered together with the recitation of the first and second carrier members being compressed together in a vertical direction, more clearly distinguishes over relative positions of the rigid synthetic resin layer 6 and sealing layers 7 of Maeda et al.

In Maeda et al. the rigid synthetic resin layer 6 and sealing layers 7 are disposed in series vertically as shown in Fig. 2. In this orientation, the compression of the sealing layers 7 cannot be uniquely limited by the height of the rigid synthetic resin layer 6.

In contrast, the compression limiter 5a of the present invention is positioned horizontally adjacent the elastomeric polymer (or elastomer) members, so that the compression limiter 5a and elastomeric polymer (or elastomer) members are disposed vertically parallel to one another. Therefore, compression of the elastomeric polymer (or elastomer) members can be uniquely limited and determined by the height of the limiter.

When the carrier members of the present invention are tightly pressed together with limiter 5a there between by a pair of planar plates, end portions of the carrier members can nip and hold a structure other than the gasket, such as a MEA of a fuel cell.

Maeda et al. does not teach such a structure or function.

Entry of the present Preliminary Amendment prior to continuation of the examination of the above-identified application is requested.


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It is believed that the above represents a complete response to the Official Action and reconsideration is requested.

If upon consideration of the above, the Examiner should feel that there remains outstanding issues in the present application that could be resolved, the Examiner is invited to contact applicants' patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,


Michael S. Gzybowski
Reg. No. 32,816

BUTZEL LONG
350 South Main Street
Suite 300
Ann Arbor, Michigan 48104
(734) 995-3110

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